

REMARKS

The Applicants have amended Claim 1. No new matter has been added. Support for the amendment can be found in the Specifications at page 5, lines 17-24 and Figs. 6 and 7.

The rejection of claims 11-15 under 35 USC 102(b) as being anticipated by Japanese patent JP 50-85181 is respectfully traversed. As pointed out in the Applicants' previous response, the construction of the electrode shown in Fig. 2 of JP 50-85181 is described at page 5 of the translation. The inner coil 6 is first coated with a suspension of the electron-emitting substance and then the outer coil 7 is wrapped around the electrode. This is done by either painting the inner coil or immersing the coil into the suspension. Fig. 2 indicates that the electron-emitting substance 8 covers the inner coil and fills in the gaps between the turns. This is in agreement with the description of Fig. 2 on page 5 of the translation and is the logical result of the method of application, "painting" or "immersing."

The reference does not describe the electron-emitting substance as being "randomly deposited on part of the surface of the first coil and not all points between the first and second coils" as asserted by the Examiner in the Final Action. In fact, the Applicants respectfully assert that such a result runs counter to the objectives of the reference. At page 5 of the translation, the reference states "that the inner coil 6 may be wrapped so that more space for the electron-emitting substance are formed." The reference then describes a heating step to keep the electron-emitting substance attached to the coil. Thus, the reference is teaching that more of electron-emitting substance is better than less. These statements are consonant with the expectation that the modes of application would produce a substantially continuous coating and are clearly at odds with the Examiner's assertion.


Since the electron-emitting material is deposited before the outer coil is added, the interior of the outer coil is not in direct contact with the exterior of the inner coil nor are each turn of the second wire in contact with two turns of the first wire. Therefore, the Applicants respectfully assert that the claimed invention is not anticipated by JP 50-85181.

With regard to the Examiner's comments on JP 59-171447 in the "Other Prior Art Cited" section of the Final Action, the Applicants respectfully assert that the embodiment shown in Fig. 2 of that reference does not show a second wire wrapped in the same direction as the first wire. The

pitch of the second coil appears to be opposite that of the first coil indicating that the second wire was wound in the opposite direction such as shown in Fig. 8 of the instant application.

In view of the foregoing amendment, it is believed that the Examiner's rejections have been overcome and that the application is in condition for allowance. Such action is earnestly solicited.

Respectfully submitted,


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